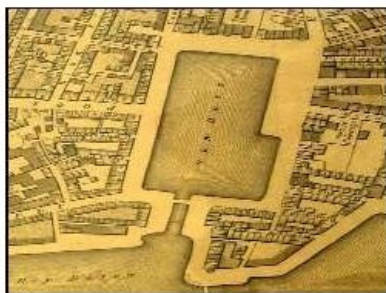


William Hutchinson (1715-1801), Liverpool Dock Master



William Hutchinson was born in 1715 in Newcastle upon Tyne, England. Following his father's death he was compelled at the age of eleven to seek employment as a cabin boy on a Newcastle collier working the coal trade from North East England to London. The strong tidal currents off the coast of East Anglia, together with unmarked sand bars around the Thames, claimed many ships and lives and was probably instrumental in directing Hutchinson's life work to improving navigational systems.

Through diligence and hard work William slowly rose through the ranks becoming a cook, a beer drawer, and by 1738 a forecandle man on an East Indiaman sailing to India and China. In 1740 Hutchinson moved to Liverpool for the rest of his life. He served as mate in the Royal

Navy on The Hyères Bay during the Mediterranean war of 1743 and later served on a vessel on the West Indian and Leghorn Trade routes. In 1747 he took command of the West Indiaman *Perle*, a privateer. Hutchinson was described as 'the ablest and boldest of the Liverpool privateers' and he remained a privateer up to July 1758. He was made Freeman of the town of Liverpool in 1755 'in consideration of his efforts for better supplying the town with sea fish by fitting out cod smacks for the purpose'.

In 1758, Liverpool City Council began looking for a competent seafarer to become the principal Dock Master of the Old Dock in its rapidly expanding port. In February 1759, Hutchinson accepted this important position. Liverpool's Old Dock was only accessible twice a day because the Mersey produced powerful tides and significant currents meaning loaded ships could safely dock or depart only at high tide.

The first tidal measurements were taken at Liverpool by Jeremiah Horrocks (1619-1641) from Toxteth Park, Liverpool. He was one of the 17th century's great scientists and Isaac Newton held him in high regard. He is known to have made measurements of high waters on the River Mersey coast near his home in Toxteth for at least a month but, unfortunately, his measurements were lost.

Hutchinson used his extensive maritime experience for improving access to the dock by observing and recording the first sustained set of tidal and meteorological measurements in the UK. Encouraged by the astronomer James Ferguson, F.R.S., he measured the heights and times of high waters and meteorological parameters (wind speed, barometric pressure, general weather conditions) for almost thirty years without a gap, night and day and under all conditions, from a marked stone wall at the Liverpool Old Dock. In the year 1764, Ferguson provided him with 'schemes, tables and plans relating to the tides'.

Hutchinson's meticulous records of the tides and his meteorological data during 1764-1767 were used by Richard and George Holden to calculate expected times and heights of tides and to publish their annual tide tables. These were the first reliable publicly accessible tide tables in the UK and first appeared in 1770. They were published for over 200 years and were used as the basis for tide tables throughout Britain. The Holdens were proud of the fact that "their calculations agreed with his observations within seven inches and within five minutes."

In 1793, aged 78, Hutchinson had to abandon his tidal and meteorological measurements noting "I could not continue any longer to make observations, for want of the command of our dock gate and gauge rod to take the night tides". He presented his records to the Lyceum Library of Liverpool. His data proved to be essential for several important studies, including studies on climate change, on changes in frequency of severe storms and tidal changes in Liverpool over the past 230 years, and on the rise in sea level due to global warming. Our quantitative knowledge of the height of sea level starts with his data, which forms the first 25 years and 7 months of the extant records.

Tidal data was later collected by Jesse Hartley, a Liverpool Dock Board Engineer who constructed many of Liverpool's docks and the Bidston Observatory on the Wirral Peninsula situated across the river Mersey.

In time, all Masters and Pilots were required to carry the tidal predictions as calculated by the Holden family. Their new and secret method was originally checked against Hutchinson's data. Unknown to Hutchinson, his data contained an internal consistency check in the form of

the "inverse barometric effect" by which an increase in barometric pressure caused a decrease in the water level, and vice-versa. More than 200 years after the data was taken, the inverse barometric effect was used to check the consistency of his data. His observations checked out without exception.

Hutchinson was also one of the founding members of the Liverpool pilot committee, founded in 1766. In 1779, he and some companions set out on horseback to find a suitable site for the pilot boats. Riding across Anglesey they identified a cove which they named Pilot's Bay. He also subscribed 100 guineas to the Liverpool Marine Society, established in 1789, to care for needy mariners and their families. He died unmarried on 11 February 1801 in Liverpool and was buried in St. Thomas churchyard, Liverpool.

Visitors to Liverpool may stumble upon an observation window, set into the pavement, which commemorates the Old Dock. They may not have heard of the gentleman who lived and worked only a matter of yards away from where they stand at the observation window. It is lamentable that Hutchinson's achievements go largely unrecognised by the city. Most cities with such an historically important citizen would have erected a statue, erected a plaque, named a street after him, or more appropriately a dock. Perhaps a campaign should be initiated to erect a suitable memorial that would give him the recognition he deserves. After all, he was "the most significant Liverpoolian of 1797".

Further reading

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<https://www.hydro-international.com/content/article/william-hutchinson-1715-1801-liverpool-dock-master>
